



Figure 3-7
CBRA Alternative Truck Route #2

SOURCE: SDBA

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terminal (refer to Figure 3-8). Use of Miller would not even be likely if the only access point were at I-94/Rotunda. In this instance, northbound trucks on I-75 will likely move from I-75 to I-94 then proceed to the proposed Rotunda terminal entrance. Likewise, trucks using I-75 from the north will likely move to I-96 then I-94 to gain access at the proposed Rotunda entrance to the terminal.

I-94/Rotunda Access

The CBRA proposal requires a new, all-direction ramp to be built at the I-94/Rotunda interchange to provide the primary access point to the west side of the terminal.

In this area, I-94 is in a cut section with Rotunda over it (Figure 3-9). Also, a railroad bridge exists approximately 450 feet to the east of the Rotunda overpass. Both Rotunda and the railroad cross I-94 at angles greater than 90 degrees. These crossings and the closeness of Rotunda and the railroad are major reasons why Rotunda/I-94 is a partial interchange.

Another key constraint in the area is the major commercial development immediately adjacent to I-94. Ford Motor Company is in the southeast quadrant and a rail yard plus other large commercial businesses exist along the freeway.

To provide a west end entrance to the DIFT site, as proposed by CBRA, access to and from I-94 would need to be tied to the railroad bridge just east of Rotunda which currently carries trains to and from the existing rail yard. In analyzing the situation, the following conditions were observed:

1. Ramps for the proposed truck-only road to the terminal cannot create an at-grade crossing with the rail line, per the railroads' requirements.
2. Land acquisition is to be avoided, per CBRA's conditions.

3. All Federal Highway Administration (FHWA) and MDOT roadway design requirements (geometrics, safety, profiles, etc.) must be met.
4. Current movements at the Rotunda interchange must be maintained.

Given these factors, a complete review of I-94 in the area of Rotunda was performed. It was determined that an all-directional interchange for a truck-only road at this location is unachievable per design guidelines established by FHWA and MDOT. More specifically, the flaws are:

1. The two existing ramps at Rotunda are located on the west side of Rotunda and are low design-speed, loop ramps (less than 25 mph), with substandard acceleration/deceleration lanes (short by approximately 250 feet). So, the existing loop ramps would have to be rebuilt for a higher design speed to require less ramp lane along I-94 or to extend the ramp lanes along I-94. Both corrections could require property acquisition and/or use of available pavement along I-94 needed for the new truck-only route interchange. So, these changes and the proposed truck road are mutually excluding.
2. Rotunda and the railroad bridge are very close (450 feet) (the railroad bridge being east of Rotunda). Both cross I-94 at an angle greater than 90 degrees. As previously mentioned, there are two low-speed, loop ramps on the west side of Rotunda. If two new loops, also low speed (25 mph), were placed on the east of the railroad bridge for access to the proposed truck-only route, a weaving lane would have to be constructed along EB and WB I-94 between the existing and proposed loop ramps. This weaving lane would be approximately 1,000 feet long. However, AASHTO the FHWA guidelines require a minimum 2,000 feet. Given that the majority of the vehicles using these ramps will be large, slow-to-accelerate/decelerate



trucks, meeting this 2,000-foot minimum is critical. On the other hand, if the loop ramps were built east of the railroad, backups along I-94 and crashes (especially rear-end) would be inevitable.

3. To avoid at-grade crossings and minimize existing rail line relocations, it was determined that the truck route should be placed on the east side of the existing rail lines. Therefore, all four ramps serving I-94 would need to be placed east of the railroad bridge. Located 1,900 feet east of the railroad bridge is the Oakman overpass, and only another 1,000 feet east, ramps begin for the Wyoming/I-94 interchange. It is not possible to place new ramps in this area and meet design standards.
4. Right-of-way acquisition and business relocation would be involved with placing a new four-ramp interchange between the existing railroad bridge and the I-94/Wyoming interchange. Along EB I-94, approximately 6.5 acres is required, which is currently a commercial storage area. Along WB I-94 approximately 12.5 acres would be involved, which would require five business acquisitions and realignment of a roadway that serves others.
5. Placing the new ramps west of Rotunda and the railroad bridge is not feasible. Ford Motor Company has a very large complex and rail yard along EB I-94 that would be affected. The area along WB I-94 is covered with commercial development. Plus, either large bridges or numerous track realignments would be required to get from I-94 over to the truck route without creating at-grade crossings. Overall, the impacts to the west of Rotunda are considered to be much higher than the impacts east of Rotunda.

I-75/Rail Line Access

The CBRA proposed east-side terminal access at the railroad and I-75 is unachievable. There are too many ramps (I-75 and I-96

interchanges), limited right-of-way, plus roadway improvements still need to be added to accommodate the new access to the Ambassador Bridge (Figure 3-10). Geometric constraints in this area make adding more ramps to the proposed rail bridge/truck-only road impossible. On the other hand, this rail line/truck road may be accessed by directing almost 8,700 trucks per day (Rail Strategy 3) (compared to about 200 expected at Gate A) to city streets. This is not consistent with CBRA's proposal.

Truck-Only Road on South Side of the Rail Terminal

Providing a circulation road inside the terminal on its south side requires it to cross to the north side in order to gain access to the proposed I-75 interchange. Cutting across the rail lines is a fatal flaw. Furthermore, placing it on the north side interferes with AMTRAK, a possible commuter rail line, and CSX and NS mainline operations. Moving these lines to the south to provide space for a road and a buffer is just not acceptable to CSX and NS.

Bridging Lonyo and Central over the Terminal

The CBRA proposal calls for bridges at Lonyo and Central over the terminal area. The DIFT project calls for underpasses.

Bridges over the rail lines are illustrated in Figure 3-11 if the terminal is not expanded as CBRA proposes. In the Lonyo situation, the bridge would have an impact 177 feet farther north of John Kronk and 571 feet further south. This structure will require the acquisition of three more business properties than the two affected by the underpass concepts.

On Central the underpass and overpass will likely affect the same area north of John Kronk. But, Clayton won't remain open as with the underpass. In either case, five businesses will likely be displaced. The bridge would impact an area 497 feet farther south of John Kronk than the underpass. This would likely cause acquisition of two more business properties.